

CLAIMS

1. Apparatus for determining the coagulation status of a liquid, the apparatus comprising a chamber for holding a quantity of said liquid, a body disposed in the
5 chamber and a magnetic device, the magnetic device co-operating with said chamber and being arranged in use to provide a magnetic field which causes the body to migrate to and fro within the chamber through uncoagulated liquid, wherein the body is other than a particle.
- 10 2. Apparatus for determining the coagulation status of a liquid, the apparatus comprising a chamber for holding a quantity of said liquid, a body disposed in the chamber and a magnetic device, the magnetic device co-operating with said chamber and being arranged in use to provide a magnetic field which causes the body to move
15 to and fro within the chamber through uncoagulated liquid, wherein the cross-sectional area of the body measured in a plane generally perpendicular to its normal direction of travel in use is at least half that of the chamber in the same plane.
3. Apparatus as claimed in any preceding claim wherein means are provided to detect movement and/or position of the body within the chamber.
- 20 4. Apparatus as claimed in claim 3 wherein the means to detect movement comprises a magnetic field sensor.
5. Apparatus as claimed in any preceding claim wherein the free volume within the
25 chamber when the chamber contains the body is less than 10 μ l.
6. Apparatus as claimed in any preceding claim wherein the chamber is formed in a disposable support strip which is removable from the apparatus.
- 30 7. Apparatus as claimed in any preceding claim wherein the chamber is elongate and

of substantially uniform cross-section.

8. Apparatus as claimed in claim 7 wherein the chamber is between 3 and 5 mm in length.

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9. Apparatus as claimed in any preceding claim wherein the body is elongate and has a cross-section of substantially the same shape as the cross-section of the chamber.

10. Apparatus as claimed in any preceding claim wherein the body is dimensioned in cross-section so that there is a clearance of at least 50 microns between the body and walls of the chamber.

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11. Apparatus as claimed in claim 10 wherein the clearance is less than 300 microns.

12. Apparatus as claimed in any preceding claim wherein the length of the chamber and body may be chosen so that the body can move at least 0.5mm to and fro within the chamber.

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13. Apparatus as claimed in any preceding claim wherein the body can move a maximum of 2mm to and fro within the chamber.

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14. Apparatus as claimed in any preceding claim wherein the body comprises a material which experiences a force when placed in a magnetic field.

15. Apparatus as claimed in any preceding claim wherein a clotting reagent is disposed in the chamber.

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16. A method of determining the coagulation status of a liquid sample comprising the steps of: providing a sample of liquid in a chamber containing a body and applying a magnetic field to the chamber to cause the body to move to and fro within the

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chamber through uncoagulated liquid, wherein the body is other than a particle.

17. A method of determining the coagulation status of a liquid sample comprising the steps of: providing a sample of liquid in a chamber containing a body; applying a
5 magnetic field to the chamber to cause the body to move to and fro within the chamber through uncoagulated liquid, wherein the cross-sectional area of the body measured in a plane generally perpendicular to its normal direction of travel in use is at least half that of the chamber in the same plane.

10 18. A method as claimed in either claim 17 or 18 comprising the steps of cyclically providing a first and a second magnetic field, said first magnetic causing the body to move in a first direction and said second magnetic field causing the body to move in a second direction, the second direction being opposite to the first.

15 19. A method as claimed in claim 18 wherein each field is provided as a short pulse, with a field free period between the short pulses.

20 20. A method as claimed in claim 19 wherein the duration of each pulse is less than 500ms.

21. A method as claimed in any of claims 17 to 20 wherein the body is caused to move to and fro within the chamber at a frequency of between 0.1 and 10 Hz.

22. A method as claimed in any of claims 17 to 21 wherein the magnitude of the
25 magnetic field is less than 25 mT.

23. A method as claimed in any of claims 17 to 22 comprising the step of detecting movement and/or position of the body using a magnetic field sensor.

30 24. A method as claimed in any of claims 17 to 23 wherein a clotting is disposed in

the chamber prior to introduction of a sample to be analysed.

25. The use of at least one magnetic field sensor to detect the movement and/or position of a body within a liquid disposed in a chamber in order to determine the coagulation status of a liquid, the body comprising a material which experiences a force when placed in a magnetic field, wherein the body is other than a particle.
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